# imall

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## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832 Email & Skype: info@chipsmall.com Web: www.chipsmall.com Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





RF360 Europe GmbH

A Qualcomm – TDK Joint Venture

### **SAW** Components

### SAW resonator

Short range devices

Series/type:	R992
Ordering code:	B39431R 992H110
Date:	December 18, 2012
Version:	2.1

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## **SAW Components**

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### Series/type: Ordering code:

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433.94 MHz

**R992** 

#### **SAW Components**

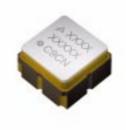
#### **SAW** resonator

Data sheet

SMD

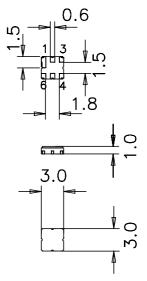
#### Application

- 1-port resonator
- Provides reliable, fundamental mode, quartz frequency stabilization i.e. in transmitters or local oscillators



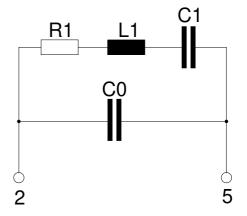
#### Features

- Package size 3.0 x 3.0 x 1.0 mm<sup>3</sup>
- Package code DCC6E
- RoHS compatible
- Approximate weight 0.037 g
- Package for Surface Mount Technology (SMT)
- Ni, gold-plated terminals
- Lead free soldering compatible with J STD20C
- Passivation layer Elpas
- AEC-Q200 qualified component family
- Electrostatic Sensitive Device (ESD)



#### **Pin configuration**

- 2 Input
- 5 Output, grounded in 1-port conf.
- 1,3,4,6 Ground (case)



2

## **公TDK**

### **SAW Components**

#### **SAW** resonator

**Data sheet** 

#### **Characteristics**

Reference temperature:	Τ <sub>Α</sub>	= 25 °C
Terminating source impedance:	$Z_S$	= 50 Ω
Terminating load impedance:	$Z_L$	= 50 Ω

		min.	typ.	max.	
Center frequency <sup>1)</sup>	f <sub>C</sub>	433.915	433.94	433.965	MHz
				4.0	
Minimum insertion attenuation	$\alpha_{min}$		1.5	1.9	dB
Unloaded quality factor	QU	7800	11000	_	
Ageing of f <sub>C</sub>				-50/+50	ppm
Equivalent circuit elements					
Motional capacitance	C <sub>1</sub>	_	1.581	—	fF
Motional inductance	L <sub>1</sub>	_	85.08	—	μH
Motional resistance	R <sub>1</sub>	_	20	28	Ω
Parallel capacitance <sup>2)</sup>	C <sub>0</sub>	_	2.4	—	pF
Temperature coefficient of frequency <sup>3)</sup>	TC <sub>f</sub>	—	-0.032	—	ppm/K <sup>2</sup>
Turnover temperature	Τ <sub>0</sub>	10	—	30	°C

SMD

<sup>1)</sup> Center frequency is defined as maximum of the real part of the admittance. <sup>2)</sup> If used in two port configuration (pin 2 - input, pin 5 - output) C<sub>0</sub> is reduced by approx. 0.3 pF. <sup>3)</sup> Temperature dependence of  $f_C$ :  $f_C(T_A) = f_C(T_0) (1 + TC_f (T_A - T_0)^2)$ 

#### **Maximum ratings**

Operable temperature range	Т	-40/+125	°C
Storage temperature range	T <sub>stg</sub>	-40/+125	°C
DC voltage	V <sub>DC</sub>	12	V
Source power	$P_S$	0	dBm

3



433.94 MHz

## **公TDK**

**SAW Components** 

#### SAW resonator

Data sheet

<u>SMD</u>

#### References

Туре	R992
Ordering code	B39431R 992H110
Marking and package	C61157-A7-A143
Packaging	F61074-V8228-Z000
Date codes	L_1126
Soldering profile	S_6001
RoHS compatible	RoHS-compatible means that products are compatible with the requirements according to Art. 4 (substance restrictions) of Directive 2011/65/EU of the European Parliament and of the Council of June 8 <sup>th</sup> , 2011, on the restriction of the use of certain hazardous substances in electrical and electronic equipment ("Directive") with due regard to the application of exemptions as per Annex III of the Directive in certain cases.

For further information please contact your local EPCOS sales office or visit our webpage at <a href="http://www.epcos.com">www.epcos.com</a>.

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4



433.94 MHz



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5